

THEORETICAL DEPTH OF -

(see designer note 9)

SCOUR COUNTERMEASURES.

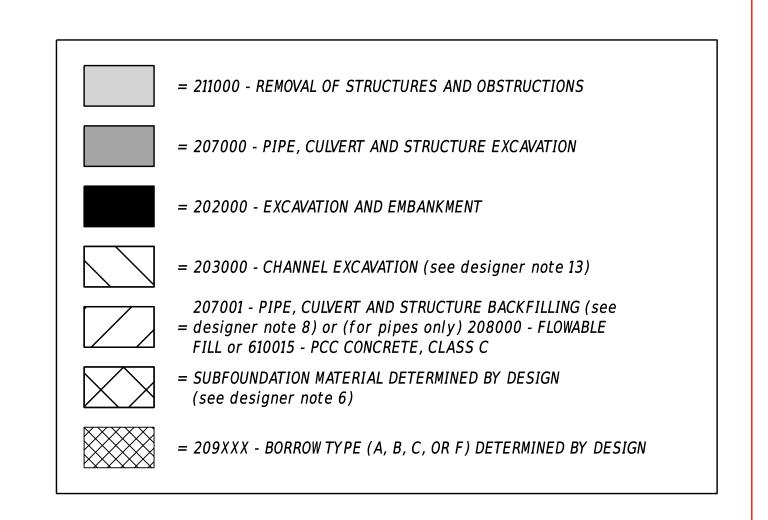
EXAMPLE SHOWS CHANNEL BED

STONES ON GEOTEXTILES

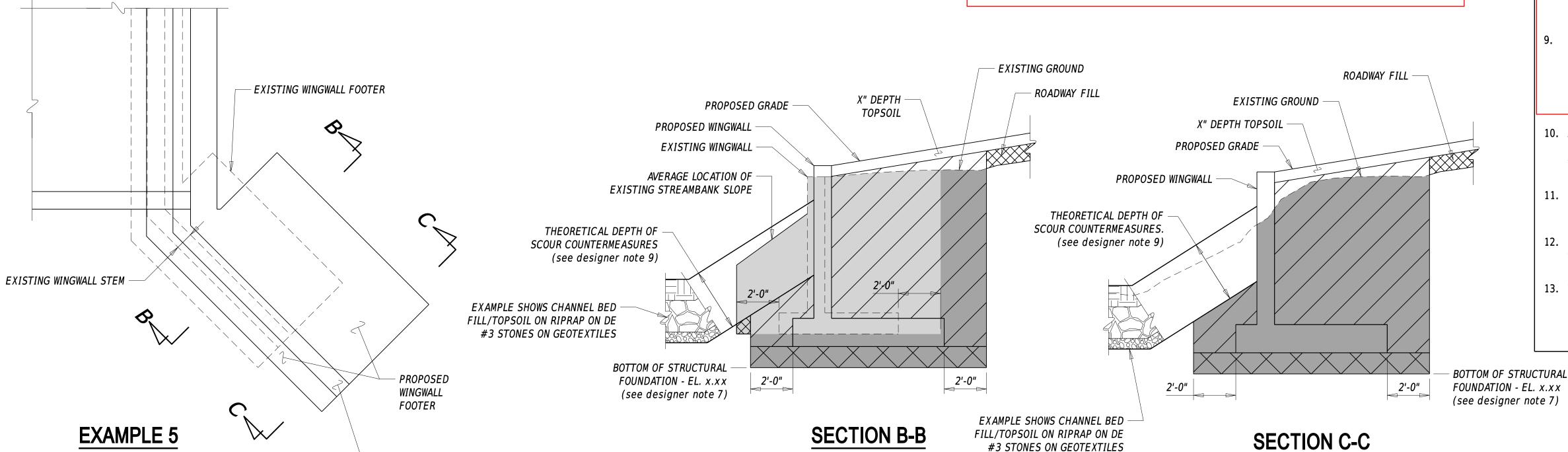
FILL/TOPSOIL ON RIPRAP ON DE #3

EXAMPLE 4

See Designer Note 4



See Designer Note 5



See Designer Note 5

DESIGNER NOTES

- 1. EXAMPLE 1 ASSUMES THAT THREE 5'-0" DIA. REINFORCED CONCRETE PIPES REPLACE TWO EXISTING 5'-0" CORRUGATED METAL PIPES. IT IS ASSUMED THAT EXTRA EXCAVATION OF 3'-6" BELOW BOTTOM OF THE LOW FLOW CHANNEL PIPE IS REQUIRED.
- 2. EXAMPLE 2 ASSUMES THAT A CONCRETE RIGID FRAME (20'-0" CLEAR SPAN) REPLACES TWO EXISTING 117" X 79" PIPE ARCHES, IT IS ASSUMED THAT EXTRA EXCAVATION BELOW PIPES IS NOT REQUIRED.
- 3. EXAMPLE 3 ASSUMES THAT PRESTRESSED ADJACENT CONCRETE BOX BEAMS ATOP STUB ABUTMENTS WITH DECK SLAB POUROVER ON PILES REPLACE EXISTING TIMBER BRIDGE (35'-0" SPAN) SUPPORTED BY TIMBER SUBSTRUCTURE ON TIMBER PILES. IT IS ASSUMED THAT THE NEW VERTICAL PROFILE IS APPROXIMATELY 2'-9" HIGHER THAN THE EXISTING VERTICAL PROFILE AND ALSO THAT THE EXISTING BRIDGE IS NOT IN CENTER OF CHANNEL. SUPERSTRUCTURE NOT SHOWN FOR CLARITY.
- 4. EXAMPLE 4 ASSUMES THAT PRESTRESSED ADJACENT CONCRETE BOX BEAMS ATOP STUB ABUTMENTS WITH DECK SLAB POUROVER ON PILES REPLACE EXISTING 20'-0" WIDE STEEL PLATE ARCH SUPPORTED BY CONCRETE FOOTERS. IT IS ASSUMED THAT CANTILEVER WINGWALLS ARE REQUIRED. SUPERSTRUCTURE NOT SHOWN FOR CLARITY.
- 5. EXAMPLE 5 ASSUMES THAT WINGWALLS FOR A CONCRETE RIGID FRAME REPLACE SMALLER EXISTING CONCRETE RIGID FRAME WINGWALLS. ASSUME BOTH WINGWALLS ARE FLARED AT 45 DEGREES.
- 6. FOR MORE INFORMATION ON DETERMINING THE APPROPRIATE TYPE OF SUBFOUNDATION MATERIAL(S), REFER TO ENGINEERING INSTRUCTIONS 16-001 -'GUIDANCE FOR EXCAVATION OF UNSUITABLE MATERIALS'.
- 7. WHEN IDENTIFIED DURING DESIGN, EXCAVATION OF UNSUITABLE MATERIAL IS INCLUDED IN THE PLAN QUANTITY FOR ITEM 207000 - PIPE, CULVERT OR STRUCTURE EXCAVATION. FOR PIPES, CULVERTS AND SPREAD FOOTINGS, THE LOWER LIMIT OF THE EXCAVATION IS IDENTIFIED ON THE PLANS AS THE BOTTOM OF STRUCTURAL FOUNDATION. REPLACE UNSUITABLE MATERIAL WITH APPROPRIATE SUBFOUNDATION MATERIAL(S). SPECIFICATION TABLE 207-A APPLIES WHEN UNSUITABLE MATERIAL, OUTSIDE OF THE PRESCRIBED LIMITS, IS UNEXPECTEDLY ENCOUNTERED DURING CONSTRUCTION.
- 8. PROVIDE BACKFILL MATERIAL UNDER ITEMS 207020 STRUCTURAL BACKFILL BORROW TYPE B. PROVIDING ONLY OR 207021 STRUCTURAL BACKFILL, BORROW TYPE C, PROVIDING ONLY FOR USE WITH ITEM 207001 PIPE, CULVERT OR STRUCTURE BACKFILLING. FOR QUANTITY CALCULATION PURPOSES, COMPUTE THE BACKFILLING ITEM VOLUME, THEN APPLY A 1.3 COMPACTION FACTOR TO DETERMINE QUANTITIES FOR THE PROVIDING STRUCTURAL BACKFILL ITEMS.
- 9. POTENTIAL EXCAVATION FOR PLACEMENT OF SCOUR COUNTERMEASURES NOT SHOWN IN EXAMPLE 2. EXCAVATION FOR SCOUR COUNTERMEASURES WILL BE PAID FOR UNDER RESPECTIVE SCOUR COUNTERMEASURE ITEM(S). REFER TO DETAILS 350.01, 355.01, AND 360.01 FOR ADDITIONAL INFORMATION ON PLACEMENT OF SCOUR COUNTERMEASURES.
- 10. ALL EXISTING PIPES SHOWN IN THIS DETAIL ARE ASSUMED TO BE PIPES CLASSIFIED AS A BRIDGE. REMOVAL FOR ALL PIPES NOT CLASSIFIED AS BRIDGES WILL BE PER DELDOT STANDARD SPECIFICATIONS.
- 11. FOR ADDITIONAL INFORMATION, REFER TO SECTIONS 202, 203, 207, AND 211 OF THE DELDOT STANDARD SPECIFICATIONS.
- 12. EXCAVATION AND BACKFILL PAY LIMITS SHOULD BE SHOWN ON PLANS AND INCLUDED IN QUANTITY CALCULATIONS REPORT.
- 13. IF THE TOTAL QUANTITY FOR 203000 CHANNEL EXCAVATION IS CALCULATED TO BE LESS THAN 20 CUBIC YARDS, THE DESIGNER MAY INCLUDE THE SMALL QUANTITY UNDER 207000 IN LIEU OF USING 203000 AND MUST MAKE A NOTE OF THIS IN THE PLANS AND QUANTITY CALCULATIONS.

PROPOSED -

WINGWALL STEM

See Designer Note 5